



Body composition and grip strength among TB patients

Praygod, George; Faurholt-Jepsen, Daniel; Range, Nyagosya; Andersen, Aase; Friis, Henrik

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ABSTRACTS 19th International Congress of Nutrition

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effect of lysine on ARIs is examined.

MATERIALS AND METHODS: In a double-blind, randomized-controlled 16-week lysine supplementation trial (n=90 men, women, children each), data were collected weekly on various health parameters, including cases reported and days ill from ARI symptoms (cold, cough, runny-nose). Chi-square, non-parametric tests and linear regression were conducted.

RESULTS: Lysine-supplemented men were less likely to report a cold (odds ratio=0.51, $p=0.0053$) than placebo. Linear regression model of mean days ill was significant ($p=0.011$) with sex/age and treatment group having significant effect. Mean days ill was significantly lower in lysine-supplemented children ($0.37 \pm .24$) than placebo (0.56 ± 0.25) ($p=0.006$).

CONCLUSION: Lysine supplemented men were less likely to suffer from acute cold than placebo while lysine supplemented children showed shorter duration of cold than placebo.

P25-03

IS MALNUTRITION ASSOCIATED WITH ACUTE RESPIRATORY INFECTION? EXPERIENCE FROM RURAL BANGLADESH

Khan, Asad

The University of Queensland, Qld, AUS

RATIONALE & OBJECTIVES: Acute respiratory infection (ARI) is a leading cause of morbidity and mortality in under-five children in developing countries with no exception to Bangladesh. ARIs are on rise in Bangladesh and hence the present study was undertaken to identify various modifiable risk factors for ARI in under-five children, especially the effect of malnutrition.

MATERIALS & METHODS: Data for this study were extracted from a nationally representative Bangladesh Demographic and Health Survey (BDHS) 2004. A total of 5416 mothers of children under five were asked whether their children had any symptom(s) of respiratory illness during the two weeks preceding the survey. As the burden of ARIs lies with rural areas, the present study was based on 5215 under-five children from rural areas of Bangladesh. Multivariate logistic regression was used to examine the relationships.

RESULTS & FINDINGS: One in five (21%) of under-five children were reported to have had the symptoms of ARI. After adjusting for all potential confounders, malnourished children were found to be 1.35 times more likely to have an ARI symptom than their nourished counterparts (95% CI: 1.15-1.58). Vitamin A deficiency was also significantly associated with ARI (OR 1.32, 95% CI 1.11-1.59). Other factors inversely associated with ARI include: children age, mother's age, socio-economic status and Muslim children.

CONCLUSION: This study suggests that improving nutritional status along with vitamin A supplementation has the potential to prevent a large proportion of ARI cases during childhood, which in turn can improve children's health in rural Bangladesh.

P25-04

EFFECTS OF CANNED PINEAPPLE CONSUMPTION ON PHYSICAL HEALTH OF SELECTED SCHOOL CHILDREN AS MANIFESTED BY THE INCIDENCE OF ACUTE VIRAL AND BACTERIAL INFECTIONS

Panlasigui, Leonora N.¹; Llido, Luisito O.²; Barrios, Emiel B.³; Maramba, Joy Noree N.¹; Kuan, Ailyn A.¹; Cervo, Mavil May C.¹

¹Philippine Women's University, Manila, PHL; ²St. Luke's Medical Center, Quezon City, PHL; ³University of the Philippines Diliman, Quezon City, PHL

A prospective randomized control trial with block design was done to examine the effect of canned pineapple consumption on the incidence of acute viral and bacterial infections and immunological markers on 99 elementary school children with mean age of 8.44 ± 0.20 years. Study participants were divided into three groups depending on whether the subjects are underweight or normal based on anthropometric parameters. Group A (control) is comprised of subjects who had regular diet with no pineapple supplementation. Group B received one can (140g) while Group C received 2 cans (280g) of canned pineapple every weekday. Socio-demographic, anthropometric, dietary laboratory, immunological and physical/clinical examination data were collected and analyzed. Group A exhibited a reduction in granulocyte count by 14.99% while Group B yielded an increase of 0.77% and Group C produced 26.60% more granulocytes. Incidence of viral and bacterial infections, skin lesions, anemia and lymphopenia for both groups B and C declined after canned pineapple supplementation. It is concluded that canned pineapple consumption may lower incidence of viral and bacterial

infections and may further increase the production of granulocytes, whether or not the subjects has infection. When the subject has infection, intake of canned pineapple may further accelerate the production of granulocytes.

P25-05

BODY COMPOSITION AND GRIP STRENGTH AMONG TB PATIENTS

Praygod, George¹; Faurholt, Daniel²; Range, Nyagosya³; Andersen, Aase²; Friis, Henrik²

¹National Institute for Medical Research, Mwanza, TZA; ²University of Copenhagen, Copenhagen, DNK; ³National Institute for Medical Research, Dar es Salaam, TZA

RATIONALE AND OBJECTIVES: To estimate lean and fat mass, and grip strength deficits among PTB patients.

MATERIALS AND METHODS: Cross-sectional data on anthropometric measurements, HIV and PTB status were collected and compared to controls.

RESULTS AND FINDINGS: 1236 PTB patients and 352 controls were included. PTB- and PTB+ had weight deficits of 8.0 (95%CI: 5.6; 10.4) and 9.2 (7.2; 11.3) kg among females, and 6.4 (4.6; 8.1) and 8.1 (6.7; 9.5) kg among males, explained by deficits of both AFA and AMA. HIV was associated with deficits of weight (2.9, 1.1;) in females, but not males (0.5, -0.7; 1.7 kg). HIV was associated with AMA deficits in both males and females, but AFA deficits only in females. PTB-, PTB+ and HIV+ patients had 7.0 (5.6; 8.5), 7.8 (6.5; 9.1) and 1.7 (0.6; 2.8) kg grip strength deficits among females, and 5.8 (4.1; 7.5), 5.3 (3.9; 6.6) and 1.5 (0.4; 2.7) kg among males.

CONCLUSION: PTB and HIV lead to losses of fat and lean mass and grip strength, although HIV mainly results in fat loss among females.

P25-06

EFFICACY OF SHORT COURSE ORAL ZINC GIVEN DURING PNEUMONIA ON SUBSEQUENT MORBIDITY AMONG YOUNG CHILDREN IN NEPAL

Chandyo, Ram K.¹; Shrestha, Prakash S.²; Valentiner-Branth, Palle³; Mathisen, Maria¹; Basnet, Sudha²; Ulak, Manjeswori²; Adhikari, Ramesh K.²; Sommerfelt, Halvor¹; Strand, Tor A.¹

¹University of Bergen, Bergen, NOR; ²Tribhuvan University, Kathmandu, NPL; ³Statens Serum Institut, Copenhagen, DNK

RATIONALE AND OBJECTIVE: The available data on short course zinc supplementation for the prevention of subsequent morbidity is inconclusive. The objective of our study was to assess the efficacy of giving zinc (<1 year: 10 mg, ≥ 1 year: 20 mg) for 14 days on preventing diarrhea and respiratory illnesses over the subsequent six months.

MATERIALS AND METHODS: This was a double blind, randomized controlled trial in children 2-35 months of age with community-acquired pneumonia. The number of, and time till outpatient visits for different infections during a 6 months follow-up were compared between the two study groups.

RESULTS: A total of 2,518 cases were available for assessment after completed zinc supplementation. The number of visits for pneumonia, diarrhea and dysentery were similar in the two groups. Similarly, the median numbers of days till the first episode of these illnesses were also not different between the groups. The hazard ratios were 1.01 (95% CI: 0.91, 1.13) for pneumonia, 1.02 (95% CI: 0.89, 1.16) for diarrhea, and 0.85 (95% CI: 0.62, 1.16) for dysentery.

CONCLUSION: Short course of zinc given during an episode of pneumonia did not seem to benefit on preventing diarrhea and respiratory illness over the next six months.

P25-07

ROLES OF SYMBIOTICS AND MICRONUTRIENTS SUPPLEMENT ON MODULATING HUMAN IMMUNE FUNCTION: A REVIEW

Suparman¹, Hardinsyah²

¹Nutrition Division, Health Polytechnic of Bandung, IDN; ²Community Nutrition Department, Faculty of Human Ecology, Bogor Agriculture University, IDN

Disruption of the indigenous gut micro flora decreases mucosal immunity and reduces nutrients absorption; and micronutrient deficiencies impair the immune